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Roberts Abokhair & Mardula, LLC			SHANNON, MICHAEL R	
Suite 1000 11800 Sunrise Valley Drive			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)				
Office Action Commons	09/816,306	ROGERS ET AL.				
Office Action Summary	Examiner	Art Unit				
	Michael R Shannon	2614				
The MAILING DATE of this communication app Period for Reply	pears on the cover sheet with the c	orrespondence address				
A SHORTENED STATUTORY PERIOD FOR REPL' THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a repl - If NO period for reply is specified above, the maximum statutory period v - Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, may a reply be timy within the statutory minimum of thirty (30) day; will apply and will expire SIX (6) MONTHS from a cause the application to become ABANDONE	nely filed s will be considered timely. the mailing date of this communication. D (35 U.S.C. & 133).				
Status						
1) Responsive to communication(s) filed on 23 M	larch 2001.					
2a) ☐ This action is FINAL . 2b) ☒ This	action is non-final.					
Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims						
 4) Claim(s) 1-21 is/are pending in the application 4a) Of the above claim(s) is/are withdray 5) Claim(s) is/are allowed. 6) Claim(s) 1-21 is/are rejected. 7) Claim(s) 9 is/are objected to. 8) Claim(s) are subject to restriction and/o 	wn from consideration.					
Application Papers						
9)☐ The specification is objected to by the Examine	er.					
10)⊠ The drawing(s) filed on 23 March 2001 is/are:	0)⊠ The drawing(s) filed on <u>23 March 2001</u> is/are: a)□ accepted or b)⊠ objected to by the Examiner.					
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the correct		* *				
Priority under 35 U.S.C. § 119						
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority document 2. Certified copies of the priority document 3. Copies of the certified copies of the priority application from the International Bureau * See the attached detailed Office action for a list	s have been received. s have been received in Applicati rity documents have been receive u (PCT Rule 17.2(a)).	on Noed in this National Stage				
Attachment(s)						
1) Notice of References Cited (PTO-892)	4) Interview Summary					
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 20030714 	Paper No(s)/Mail Da 5) Notice of Informal P 6) Other:	ite atent Application (PTO-152)				

DETAILED ACTION

Claim Rejections - 35 USC § 112

- 1. The following is a quotation of the first paragraph of 35 U.S.C. 112:
 - The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
- 2. Claims 12-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed "preference information" is not disclosed in the specification. A very brief mention of "parental control data" is made on page 14, paragraph 62, however, not in detail enough to be understood as "preference information". As for the following art rejection, claims 12-14 are assumed be broad interpretations of "preference information" and are rejected accordingly.
- 3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 4. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claimed "instructions for:" are not present. As for the following art rejection, claim 15 is assumed to echo the "instructions for:" section of

claim 19, the first receiving, second receiving, distributing, and transmitting steps are rejected accordingly.

Drawings

- 5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "186" has been used to designate both content manager and clients [page 12, paragraph 57]. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filling date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
- 6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 130, 134, 154, 156, 158, 160, 162, 166, and 182. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of

an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 54, 56, 62, 72, 74, 102, 104, 106, and 108. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

8. Claim 9 is objected to because of the following informalities: The expected work "data" is missing after "wherein the user", and before "reflects the user's selection of the object button". Appropriate correction is required.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- 10. Claims 1, 3-15, 17-19, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Cameron et al (WO 99/63759).

Regarding claim 1, the claimed method for multi-casting video content to plural user computers is met as follows:

- The claimed step of distributing a video content program from a content center to plural regional data centers via an open network is met by page 6, lines 2-10, wherein the Cameron reference discloses a satellite located at the head-end to receive content video signals [Fig. 2] from a content provider over satellite 12 (satellite transmission being that of an open network).
- The claimed step of distributing the video content program from each of the plural regional data centers to user computers network-connected to the plural regional data centers according to a multi-cast protocol is met by

page 6, lines 5-20, wherein the Cameron reference discloses an IP multicast broadband network for distributing the encoded video signals.

The claimed step of transmitting non-video data related to the video content program to the user computers for display by the user computers contemporaneously with the video content program is met by page 8, lines 5-23, wherein the Cameron reference discloses the transmission of interactive TV, Web Browsing, Web-based Email, IPG, VOD and pay-per-view services through the DTVM interface.

Regarding claim 3, the claimed open network being selected from the group consisting of a satellite network, a terrestrial wireless network, a cable network, and a fiber optic network is met by the discussion, on page 6, line 32 – page 7, line 2 of the use of satellite and off-air broadcasts to transmit the television broadcast signals to the head-end.

Regarding claim 4, the claimed user computers being network-connected via a distribution network selected from the group consisting of a satellite network, a terrestrial wireless network, a cable network, and a fiber optic network is met by the discussion, on page 6, lines 8-20, wherein the Cameron reference discloses the use of ADSL, HFC, FTTC, or wireless service as a distribution multicast network.

Regarding claim 5, the claimed method is met as follows:

 The claimed step of receiving the video content program and the nonvideo data at at least one of the user computers connected to the distribution network is met by page 6, lines 22-30, wherein the Cameron

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reference discloses that the set top box 22 is used to receive TV broadcast and data from the distribution network.

- The claimed step of displaying the video content program at the at least one user computer through a graphical user interface (GUI), met by the integration of many interactive features at the STB using the DTVM [Figs. 6-8] the GUI further comprising an object button met by the icon discussed on page 13, lines 29 33, which is used to display messages related to the video signal for selection by the user associated with an object in the video content program and a control button met by the VCR-like controls discussed on page 11, lines 17-21, which are used to control the playback of the VOD associated with the display of the video content program is met by the above and the discussion of the "relevant data concerning program content and time remaining" being selectable by through the IPG and related to the video content program [page 9, lines 31-33].
- The claimed step of generating, at the at least one user computer, user data corresponding to selection of the object button or the control button by the user is met by the inherent function of the DTVM. The DTVM serves to collect user data and profile data as well as to provide interactive services to the user via the distribution network [page 11, lines 5-10].
 When a user clicks on the object button, a query is sent to the DTVM and corresponding information is sent to the user [page 9, line 31 page 10,

line 2]. When a user clicks on the control button, a request to control the video is sent to the VOD server 72 and the control information is sent back to the user to provide interactive VCR controls for optimal control [page 11, lines 17-21].

- The claimed step of receiving the user data at the regional data center to which the at least one user computer is network connected is met by the reception of the user data (as discussed in the rejection to the previous step) at the VOD Server 72 and DTVM.
- The claimed step of processing the user data received from the user is
 met by the same discussion in the rejection to the generating step with
 regards to the received user information being received and processed at
 the VOD Server and the DTVM.
- The claimed step of sending a response to the at least one user computer is met by the same discussion in the rejection to the generating step with regards to the received user information being received and processed at the VOD Server and the DTVM and the response being sent back to the user as an answer to their query and to provide more information or control over the video content program.

Regarding claim 6, the claimed video content program comprising a game and the user data comprising game play is met by page 15, lines 3-6, wherein the Cameron reference discloses a games on demand system, which delivers games in a similar fashion to the VOD Server and the user data is used to play the game.

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Regarding claim 7, the claimed video content program comprising a plurality of selectable responses and the user data comprising a response selected by the user is met by the IPG, which provides the user with multiple possible selections of data and the user data comprises the selection and subsequent display of the associated video program [page 9, lines 9-23].

Regarding claim 8, the claimed object button being associated with information data is met by page 9, line 31 – page 10, line 2, wherein the Cameron reference discloses the clicking of a highlighted selection which displays further information regarding the selection. The claimed user data reflecting the user's selection of the object button is met by the clicking action and the user's selection by highlighting. The claimed response to the user comprising the information data is met by the return of "relevant data concerning program content and time remaining..."

Regarding claim 9, the claimed object button being associated with an office to sell goods and services is met by the ability, within the IPG, to select pay-per-view movies [page 9, lines 4-10] via the grid object buttons. The claimed user data reflecting the user's selection of the object button is met by the by the clicking action and the user's selection by highlighting. The claimed response to the user comprises the offer is met by the system's ability to deliver pay per view movies based on user selection through the IPG.

Regarding claim 10, the claimed video content program comprising a prerecorded program is met by the "virtual VCR, which has the ability to record and playback various programs in the network" [page 15, lines 28-30]. The claimed non-

video data comprising a control command associated with the control button is met by the Network VCR functions, which "provide a subscriber with all the features of a VCR" [page 16, lines 17-21]. The claimed user data reflecting the user's selection of the control button is met by the clicking action and the user's selection by highlighting. The claimed response to the user comprising executing the control command is met by the inherent teaching that the Network VCR can perform all of the functions a regular VCR car perform and therefore does so upon selection of the control function by the user.

Regarding claim 11, the claimed control command being selected from the group consisting of video stop, video start, video rewind, video pause, video freeze frame, video slow motion, video display size, video image save, program menu, channel selection, volume, and audio mute is met by the Network VCR which can "provide a subscriber with all of the features of a VCR" [page 16, lines 17-21].

Regarding claim 12 (see above 35 USC 112 rejection), the claimed method for multi-casting video content is met as follows:

- The claimed step of requesting preference information from the user is met by Customer profile management system/subscription management system 68, which collects preference information from the user [page 11, lines 5-10].
- The claimed step of receiving preference information from the user at the regional control center is met by the preference data being stored at the head-end [page 11, lines 5-10].

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 The claimed step of storing preference information associated with the user at the regional data center is, again, met by the preference data

being stored at the head-end [page 11, lines 5-10].

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 The claimed step of processing preference information to provide distribution of video content program and processing of user data in accordance with the preference information is met by the Banner Server 64, which provides ad insertion based on customer profile [page 10, lines 27-30].

Regarding claim 13 (see above 35 USC 112 rejection), the claimed preference information comprising parent control data is met by the "usage patterns" discussed on page 11, line 7 and the parental determination based on the usage patterns [page 19, lines 1-3].

Regarding claim 14 (see above 35 USC 112 rejection), the claimed preference information comprising user transaction data is met by the "usage patterns" and other profile information being stored [page 11, lines 5-10].

Regarding claim 15 (see above 35 USC 112 rejection), the claimed system for multi-casting video content to plural user computers is met as follows:

- The claimed content server is met by the video source 12, which is connected to the head-end via a satellite link [page 5, lines 22-29].
- The claimed content server comprising a first processor, a first storage
 means, and a first memory which comprises a set of software instructions
 is met by the inherent teaching of the broadcast provider, which can

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access television broadcast signals from various sources and send them to the head-end [page 6, line 32 – page 7, line 5]. This inherently teaches a computer consisting of the basic computer requirements (processor, storage means, and memory) located at and/or serving as the content server.

- The claimed first memory (from above) comprising a first set of software instructions for distributing a video content program from a content center to plural regional data centers via an open network is met by the video source's (content server's) ability to provide the received television and other programming to the head-end for subsequent transmission via multicast over the broadband network [page 6, lines 2-10].
- The claimed distribution server is met by the aforementioned head-end [page 6, lines 2-10].
- The claimed distribution server comprising a second processor, a second storage device, and a second memory device is met by the inherent teaching of the head-end, which can link to the content server via satellite [page 6, lines 2-5]. This inherently teaches a computer consisting of the basic computer requirements (processor, storage means, and memory) located at and/or serving as the distribution server.
- The claimed second memory (from above) comprising software instructions for receiving the video program content, receiving the non-video data, distributing the video content program via a distribution

network according to a multi-cast protocol, and transmitting the non-video data contemporaneously with the video program content over the distribution network is met by the head-end's ability to receive video and non-video data over satellite link video source 12 [page 6, lines 2-10], then distributing the video data in multicast IP format over the distribution network, and finally transmitting the non-video data such as IPG and other interactive features over the distribution network at the same time via the distribution network.

Regarding claim 17, the claimed open network being selected from the group consisting of a satellite network, a terrestrial wireless network, a cable network, and a fiber optic network is met by the discussion, on page 6, line 32 – page 7, line 2 of the use of satellite and off-air broadcasts to transmit the television broadcast signals to the head-end.

Regarding claim 18, the claimed user computers being network-connected via a distribution network selected from the group consisting of a satellite network, a terrestrial wireless network, a cable network, and a fiber optic network is met by the discussion, on page 6, lines 8-20, wherein the Cameron reference discloses the use of ADSL, HFC, FTTC, or wireless service as a distribution multicast network.

Regarding claim 19, the claimed system for multi-casting video program content and non-video data over a distribution network is met as follows:

 The claimed video program content is met by the television broadcast signals from various sources [page 6, line 33].

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- The claimed non-video data contextually related to the video program content is met by the IPG information [page 9, lines 9-23], which is related to the video program content in that it provides an interactive schedule. Also, all of the claimed features of the DTVM which serve to make the system interactive, such as the "brief information banners" [page 9, lines 31-33], the Web Browsing, Web-based e-mail, VOD, and pay-per-view services, which all relate to the video program content [page 9, lines 5-9].
- The claimed multicasting computer comprising a processor, a storage means, and a memory is met by the head-end, which serves to receive video content from the video sources 12, convert it to multicast IP format and distribute it over the distribution network to the end users [page 6, line 32 page 7, line 5]. The components (processor, storage means, and memory) are all met inherently by the teaching of the computer. Every generic computer has at least these three components, therefore, the teaching of the head-end inherently meets the claimed components.
- The claimed software instructions for receiving the video program content, receiving the non-video data, distributing the video content program via a distribution network according to a multi-cast protocol, and transmitting the non-video data contemporaneously with the video program content over the distribution network is met by the head-end's ability to receive video and non-video data over satellite link video source 12 [page 6, lines 2-10], then distributing the video data in multicast IP format over the distribution

network, and finally transmitting the non-video data such as IPG and other interactive features over the distribution network at the same time via the distribution network.

Regarding claim 21, the claimed distribution network being selected from the group consisting of a satellite network, a terrestrial wireless network, a cable network, and a fiber optic network is met by the discussion, on page 6, lines 8-20, wherein the Cameron reference discloses the use of ADSL, HFC, FTTC, or wireless service as a distribution multicast network.

Claim Rejections - 35 USC § 103

- 11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 12. Claims 2, 16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron et al (WO 99/63759).

Regarding claim 2, the claimed method for multicasting video content is met by Cameron et al in claim 1. Cameron et al, does not, however, specifically teach that the multi-cast protocol used is the Internet Group Management Protocol (IGMP) and class D addressing with private multi-cast addresses. However, the examiner takes Official Notice as to the fact that the IGMP protocol with class D addressing is well known in the art. The IGMP protocol is the standard protocol for multicast sessions and allows

membership in particular multicast groups on a single network. Private class D addressing simply allows for IP addresses in the range of 244.0.0.0 – 239.255.255.255, which is also commonly known in the art. The examiner therefore submits that it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the IGMP protocol with class D addressing in order to comply with regularly accepted standards for establishing and maintaining a multicast distribution network.

Regarding claim 16, the claimed system is met by Cameron et al in claim 15. Cameron et al, does not, however, specifically teach that the multi-cast protocol used is the Internet Group Management Protocol (IGMP) and class D addressing with private multi-cast addresses. However, the examiner takes Official Notice as to the fact that the IGMP protocol with class D addressing is well known in the art. The IGMP protocol is the standard protocol for multicast sessions and allows membership in particular multicast groups on a single network. Private class D addressing simply allows for IP addresses in the range of 244.0.0.0 – 239.255.255.255, which is also commonly known in the art. The examiner therefore submits that it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the IGMP protocol with class D addressing in order to comply with regularly accepted standards for establishing and maintaining a multicast distribution network.

Regarding claim 20, the claimed system for multi-casting video content program and data content over a distribution network is met by Cameron et al in claim 19.

Cameron et al, does not, however, specifically teach that the multi-cast protocol used is the Internet Group Management Protocol (IGMP) and class D addressing with private

multi-cast addresses. However, the examiner takes Official Notice as to the fact that the IGMP protocol with class D addressing is well known in the art. The IGMP protocol is the standard protocol for multicast sessions and allows membership in particular multicast groups on a single network. Private class D addressing simply allows for IP addresses in the range of 244.0.0.0 – 239.255.255, which is also commonly known in the art. The examiner therefore submits that it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the IGMP protocol with class D addressing in order to comply with regularly accepted standards for establishing and maintaining a multicast distribution network.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

DeNicola et al (USPN 6,288,753) disclose a system for interactive distance learning, which utilizes a multicast protocol to deliver video and auxiliary information (such as testing information) in order to aid in the interactive distance-learning environment.

Almeroth et al (1996 IEEE) disclose the use of multicast delivery to provide for a VOD system.

Needham (USPN 5,894,305) discloses a system for displaying graphical messages within a GUI that are transmitted via a multicast protocol for interaction therewith.

Gagnon et al (USPN 6,522,342) disclose a system for interactively selecting a multicast video program using a slider bar and associated GUI.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael R. Shannon whose telephone number is (571) 272-7356. The examiner can normally be reached Monday through Friday 7:00 AM – 5:00PM, with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached at (571) 272-7353.

Any response to this action should be mailed to:

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Hand-delivered responses should be brought to:

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is (571) 272-2600.

Michael R Shannon Examiner Art Unit 2614

Michael R. Shannon March 4, 2005

> JÖHN MILLER SUPERVISORY PATENT EXAMINER

TECHNOLOGY CENTER 2600